

HIGHER EDUCATIONAL INSTITUTION OF UKOOSPILKA  
«POLTAV UNIVERSITY OF ECONOMICS AND TRADE»

Educational and Scientific Institute of International Education  
Department of commodity science, biotechnology, expertise and customs

## SYLLABUS

educational disciplines

### «Expert research in biotechnology»

on 2022-2023 educational year

Course and semester study	4th year, 1,2 semester
Educational program/specialization	«Biotechnology»
Specialty	162 Biotechnology and bioengineering
Branch of knowledge	16 Chemical and bioengineering
Degree higher education	bachelor

Name of the NPP that leads this discipline,  
scientific degree and academic title,  
position

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Schedule educational classes	<a href="http://schedule.puet.edu.ua/">http://schedule.puet.edu.ua/</a>
Consultations	ocular <a href="http://www.tpt.puet.edu.ua/">http://www.tpt.puet.edu.ua/</a> online: by email, mon-fri with 10.00-15.00
Page remote course	<a href="https://el.puet.edu.ua/">https://el.puet.edu.ua/</a>

### Description educational disciplines

<b>The purpose of the study educational disciplines</b>	Acquisition by future specialists of theoretical knowledge and practical skills in organization and the procedure for conducting an examination of the quantity and quality of domestic food products and foreign production, features carrying out examination's individual groups goods
<b>Duration</b>	6 loans EKTS/180 hours (lectures 32 hours, practical occupation 40 hours, independent work 108 hours)
<b>Forms and method teaching</b>	Lectures and practical occupation in audience, away, business games, independent work outside schedule interactive discussion.
<b>Current system and final control</b>	Current CONTROL: visiting occupations; discussion material occupations; implementation educational tasks; testing; current modular work Final control: 1st semester - PMK (test); 2nd semester - Exam
<b>Basic knowledge</b>	General biotechnology, Processes and devices biotechnological productions, Technology bio-production, Biotechnology and health a person
<b>Language teaching</b>	Ukrainian, English

### List competencies, which provides given educational discipline, software the results teaching

Software the results teaching	Competencies, which ones should master getter
<ul style="list-style-type: none"> <li>• Be able conduct experimental research with purpose definition impact physical and chemical and biological factors external environment on vital activity of cells alive organisms (IIP10);</li> <li>• Be able independently organize and conduct scientific research, critically evaluate the results results, formulate conclusions, evaluate them theoretical, practical and commercial value (IIP25)</li> </ul>	<ul style="list-style-type: none"> <li>• Ability apply knowledge in practical situations (3K01);</li> <li>• Ability carry out analysis regulatory documentation, necessary for implementation engineering activity in industry biotechnology (CK03);</li> <li>• Ability carry out experimental research with improve biological agents Skill cause changes in structure hereditary device and functional activity biological agents (CK05);</li> <li>• Ability conduct analysis of raw materials, materials, semi-finished products, targeted biotechnological products production (CK06).</li> </ul>

## Thematic plan educational disciplines

Name topics	Kinds works	Task independent work incut topics
<b>Module 1. Foundations and expertise technology</b>		
<b>Topic 1.</b> Concept, goal and task of expertise goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Learn legally regulation expert activity organizations and enterprises, what carry out examination goods
<b>Topic 2.</b> Role and functions commercial and industrial chambers in formation international trade	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Familiarization from classification expertise, characteristic general species examination and their application
<b>Topic 3.</b> Informational means expertise goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Study requirements to of order obtaining, use, distribution and storage information, and also systems creation information, her sources, status participants informative relations, access to information and her protection
<b>Topic 4.</b> Organization carrying out expertise	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Study of typical errors under time carrying out examinations
<b>Topic 5.</b> Technology carrying out expertise goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Learn features examinations goods from damaged packaging
<b>Topic 6.</b> Sanitary-hygienic, veterinary, ecological expertise goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Using the Law of Ukraine «About veterinary medicine», learn order issues hygienic conclusions
<b>Topic 7.</b> Merchandising judicial expertise	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Using Law of Ukraine «About judicial examination» and «Instruction about appointment and conducting forensic examinations and expert research», familiarize yourself with the main tasks of the court commodity examination, indicative list solvable questions
<b>Module 2. Expertise food raw materials and food products</b>		
<b>Topic 8.</b> Phytosanitary expertise	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	To learn features identification individual species quarantine organisms
<b>Topic 9.</b> Technological expertise food products	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Study impact technologies production and equipment on quality and safety ready products Sanitary requirements to production shops, raw materials, materials and equipment.
<b>Topic 10.</b> Identification and falsification goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	To study the types of falsification and their characteristic
<b>Topic 11.</b> Aspects commodity scientist expertise s flour, groats, pasta, bakery products and food concentrates	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Familiarize yourself with the permissible and inadmissible defects flour, croup, pasta, bakery products and food concentrates
<b>Topic 12.</b> Features expertise starch, sugar, honey, confectionery products andtasteful goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	To learn hygienic requirements to confectionery goods
<b>Topic 13.</b> Features expertise of fresh and processed fruits and vegetables	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Studying the criteria identification fruits and vegetables goods
<b>Topic 14.</b> Features commodity scientist expertise dairy products, food fats, eggs and eggs goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Study defects eggs and eggs goods
<b>Topic 15.</b> Features commodity scientist expertise meat and fish goods	Visiting occupations; discussion material occupations; implementation educational tasks; task independent works	Study features marking meat birds and products her processing. Determining the conformity of labeling fish canned food and preserves

## Informational sources

1. Aina A.J.; Falade, K.O.; Akingbala, J.O.; Titus, P. Physicochemical Properties of Caribbean Sweet Potato (*Ipomoea batatas* (L.) Lam) Starches. *Food Bioprocess Technol.* 2012, 5, 576–583
2. FAO. Statistical Databases FAOSTAT. 2014. Available online: <http://faostat.fao.org/es/#data/QC> (accessed on 26 June 2016).
3. Lim T.K. *Cucurbita Moschata*. Available online: [http://link.springer.com/chapter/10.1007/978-94-007-1764-0\\_41#page-2](http://link.springer.com/chapter/10.1007/978-94-007-1764-0_41#page-2) (accessed on 20 March 2016).
4. On the protection of consumer rights: Law of Ukraine No. 1023-XII edition of 01.01.2016 [Electronic resource]: official website portal Verkhovna Council of Ukraine. Regulatory and legal framework of Ukraine. – Regime access : <http://zakon.rada.gov.ua>
5. Sharma Avantina, Textbook of Food Science and Technology, CBS Publishers and Distributors Pvt. Ltd. New Delhi, 2017.
6. Shekhar S.; Mishra, D.; Buraohain, A.K.; Charkaborty, S.; Charkaborty, N. Comparative analysis of phytochemicals and nutrient availability in two contrasting cultivars of sweet potato (*Ipomoea batatas* L.). *Food Chem.* 2015, 173, 957–965.
7. Srilakshmi B., Nutrition Science, Fourth Revised Edition: 2012, New Age International Limited, New Delhi, 2012
8. Theodoros Varzakas. Qualitative Analysis of Food Products. - Published: September.2021. – 90 p. <https://doi.org/10.3390/books978-3-0365-1845-9>.
9. Zaccari F.; Cabrera, M.C.; Ramos, A.; Saadoun, A. In vitro bioaccessibility of  $\beta$ -carotene. Ca, Mg and Zn in landrace carrots (*Daucus carota*. L.). *Food Chem.* 2015, 166, 365–371.

## Educational discipline software

- Microsoft Office suite of software products.

## Policy of study of academic discipline and assessment

- **Policy regarding deadlines, rescheduling of tasks, ongoing control; admission to the final control**, all tasks provided for by the program must be completed within the set deadline; assignments that are submitted late without good reason are evaluated at a lower grade (75% of the possible maximum number of points for the type of activity). Modules can be rearranged with the permission of the leading teacher if there are good reasons (for example, sick leave).
- **The procedure for admitting students to the credit and examination session:** [http://puet.edu.ua/sites/default/files/poryadok\\_dopusku\\_studentiv\\_do\\_zalikovo-ekzamenaciynoyi\\_sesiyi.pdf](http://puet.edu.ua/sites/default/files/poryadok_dopusku_studentiv_do_zalikovo-ekzamenaciynoyi_sesiyi.pdf) . Early submission of the final examination - according to DPSY M-9-8.1-211-54-19 "Procedure for granting permission to a student for early submission of credit and examination session" [http://puet.edu.ua/sites/default/files/poryadok\\_nadannya\\_do\\_zvolu\\_na\\_dostrokovu\\_ekz\\_sesiyu.pdf](http://puet.edu.ua/sites/default/files/poryadok_nadannya_do_zvolu_na_dostrokovu_ekz_sesiyu.pdf) .
- **Policy on academic integrity:** according to the "Regulations on prevention of cases of academic plagiarism" [http://puet.edu.ua/sites/default/files/polozhennya\\_pro\\_zapobigannya\\_vypadkiv\\_akademichnogo\\_plagiatu.pdf](http://puet.edu.ua/sites/default/files/polozhennya_pro_zapobigannya_vypadkiv_akademichnogo_plagiatu.pdf) , it is not permissible to violate academic integrity while working on the course material.
- **Attendance policy:** attending classes is a mandatory component, but for objective reasons (war in Ukraine, illness, employment, internship) training can take place online (Moodle).
- **Policy of recognition and enrollment of learning results obtained through informal and/or informal education** [http://puet.edu.ua/sites/default/files/polozhennya\\_pro\\_zarahuvannya\\_rezultativ\\_neformalnoyi\\_osvity\\_0.pdf](http://puet.edu.ua/sites/default/files/polozhennya_pro_zarahuvannya_rezultativ_neformalnoyi_osvity_0.pdf) .
- **Graphic presentation of information on the policy of recognition and enrollment of learning outcomes obtained through non-formal and/or informal education:** <http://www.puet.edu.ua/uk/neformalna-osvita> .

## Assessment

Final rating by study educational disciplines is calculated by current assessment

Kinds works	Maximum number points
Module 1 (topics 1-7): visiting lectures (1 points); availability processed material with topicslectures (2 points); visiting classes (1 points); discussion material classes (2 points); implementation educational tasks (2 points); task independent work (2 points); current modular work (30 points)	100
<b>Total</b>	<b>100</b>
Module 2 (topics 8-15): task independent work (1 points); current modular work (28 points)	60
<b>Exam</b>	<b>40</b>
<b>Total</b>	<b>100</b>

For participation in research work and other activities, additional points are awarded to winners. For additional types of educational work, a student of higher education can receive no more than 30 points. Additional points are added to the total final grade for studying the academic discipline, but the total final grade cannot exceed 100 points.

**The scale of evaluation of students of higher education according to the results of the study of the academic discipline**

<b>The sum of points for all types of educational activities</b>	<b>Evaluation according to the ECTS scale</b>	<b>Evaluation on a national scale</b>
90-100	A	Perfectly
82-89	B	Very good
74-81	C	Fine
64-73	D	Satisfactorily
60-63	E	Satisfy enough
35-59	FX	Unsatisfactory with the possibility of reassembly
0-34	F	Unsatisfactory with mandatory repeated study of the academic discipline